The safety of early enteral feeding in children with acute pancreatitis

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Abbreviations: AP, Acute Pancreatitis

A recent national, prospective incidence study in the United Kingdom estimates the rate of acute pancreatitis in children less than 15 years of age to be 0.78 cases per 100,000 persons/year[1]. However, another single-center study suggests the incidence may be about five times higher (3.6 cases/100,000 persons/year).[2] Although many cases of AP are drug related or due to gallstone disease, often the cause is idiopathic.[1] In this issue of *Pediatrics,* Ledder and colleagues describe the results of a small randomized trial allocating children in two countries with mild-to-moderate AP to early (within 24 hours) enteral feeding (unrestricted oral diet) or delayed enteral feeding (low-fat diet introduced after symptom resolution).[3] The study was powered to demonstrate a 30% reduction in duration of hospitalization as adult studies have suggested the benefit of early enteral (mainly naso-jejunal) feeding to reduced hospital stay: other benefits include reduced complication and lower mortality rates.[4,5]

This study by Ledder and colleagues found the length of hospital stay was similar regardless of early or delayed feeding. This could be due to the pain that children with AP experience when eating. Pain scores did appear markedly higher on day 1 in the early feeding group, although the numbers are too small for meaningful statistical testing.

It is important to recognize that a negative finding from a study designed to evaluate superiority does not mean that the interventions are equivalent. Equivalency studies require a larger sample size. Although the Ledder study was underpowered to demonstrate equivalency, there is a suggestion that time to being pain free was similar between the early and delayed feeding groups. Another intriguing finding was the 2kg difference in weight at follow up at a median of seven weeks in those receiving early enteral nutrition. Although the authors do not speculate on why this should be the case, early feeding might favor improved gut functional integrity or possibly the children found an unrestricted diet more palatable than a low-fat diet and thus ate more.

One important limitation of this study was the exclusion of trauma and biliary disease. Both are associated with AP in childhood and thus limit the generalizability of this study.

This prospective study adds support to the hypothesis that early enteral feeding may be of benefit in managing AP in most children. The findings complement those of Szabo and colleagues in a retrospective study in Cincinnati[6] and a prospective study with historical control data from two US centers,[7] both suggesting that early feeding is safe and likely to be of benefit in reducing complications and possibly time in the hospital. What is needed now is a randomized trial across international sites with sufficient power to demonstrate equivalence in outcomes to ensure safety of early feeding. If these findings are confirmed by future research, greater adoption of early enteral feeding in AP should follow.

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